



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/758,275	01/16/2004	Akihiro Ozeki	008312-0307686	5145

909 7590 04/27/2007
PILLSBURY WINTHROP SHAW PITTMAN, LLP
P.O. BOX 10500
MCLEAN, VA 22102

EXAMINER

FANTU, YALKEW

ART UNIT	PAPER NUMBER
----------	--------------

2838

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	04/27/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary

Application No.

10/758,275

Applicant(s)

OZEKI, AKIHIRO

Examiner

Yalkew Fantu

Art Unit

2838

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 08 February 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-10 and 15-17 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-10 and 15-17 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☐ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- ☐ Notice of Informal Patent Application
- ☐ Other: _____

DETAILED ACTION

Drawings

The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, "the first" and "second control sections" of claims 1, 6 and 15, or anywhere else claimed, must be shown and labeled in the figures or the feature(s) canceled from the claim(s). Also, the "portion connecting the electronic apparatus and the fuel cell must be shown". (These must also be identified in the specification and labeled with a drawing reference number.) Also No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner,

the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent²³ in the United States.

Claim 1-10 are rejected under 35 U.S.C. 102(b) as being anticipated by Marvin et al (US 6,761,987).

With respect to claim 1, Marvin et al discloses an electronic apparatus (Fig. 1 element 10) a fuel cell unit (Fig. 1 element 12) capable of generating power by chemical reaction (Fig. 1 elements 14 and 42), an auxiliary mechanism (such a fuel pump; fig. 1, 14) for the fuel cell, and a chargeable / dischargeable secondary battery (Fig. 1 element 22), comprising: a first control section (fig. 1, 40; par. 4, lines 41-46) to instruct the fuel cell unit, through a portion connecting the electronic apparatus and the fuel cell unit (the underline phrase does not clearly indicate, and therefore the controller 40 is connected to the fuel cell 12 and all others including the load), to charge the secondary battery (fig. 1, 22) using power supplied from the fuel cell (fig. 1, 12) in a case where a capacity of the secondary battery is smaller than a first value when a power supply of the electronic apparatus is turned off (par. 4, lines 41-46); and a second control section (fig. 1, 40:13)

Art Unit: 2838

to instruct the fuel cell unit, through a portion connecting the electronic apparatus and the fuel cell unit, to start up when a power supply of the electronic apparatus is turned on (par. 3, line 54-57; col. 4, lines 5-8), the fuel cell unit driving the auxiliary mechanism (fig. 1, 14) for the fuel cell using power charged in the secondary battery (fig. 1, 22) in response to the instruction of the start up.

With respect to claim 2, Marvin et al teaches the electronics apparatus according to claim 1, further comprising a third control section to instruct the fuel cell unit to stop charging the secondary battery when a specific instruction is issued while the secondary stop (fig. 1, 40; PROG 13; has the capability to issue the instruction) charging the secondary battery (Fig. 1 element 22) when specific instruction issued while the secondary battery is being charged (fig. 2, 40:13).

With respect to claim 3, Marvin also discloses further comprising a third control section to instruct the fuel cell unit to stop charging (fig. 1, 40; PROG 13) the secondary battery (Fig. 1 element 22) and turns on the power supply of the electronics apparatus (Fig. 1 20) if a specific instruction is issued (Fig. 1 element 13; Col. 3 40-46).

With respect to claim 4, the electronics apparatus according to claim 1 (Fig. 1 10), further comprising a third control section to instruct the fuel cell unit to stop (fig. 1, 40; PROG 13) the secondary battery (Fig. 1 element 22) when a predetermined period of time elapses after the battery starts to be charged (Fig. 2 and 3; Col 4 lines 5-20).

With respect to claims 5, 6 and 7 Marvin discloses a further comprising a third control section to instruct the fuel cell unit to stop (fig. 1, 40; PROG 13) charging the secondary battery (Fig. 1 element 22) when the capacity exceeds a second value after

Art Unit: 2838

the battery starts (Col. 4 lines 40-45). An operational control method using (fig. 1, 40: 11 and 13) an electronic apparatus (Fig. 1 element 20) to which a fuel cell unit is attachable, the fuel cell unit including a fuel cell (Fig. 1 element 12), and capable of generating power by chemical reaction (Fig. 1 elements 14, 42 and 44), an auxiliary mechanism for the fuel cell (fig. 1, 14), and a chargeable/dischargeable secondary battery, the electronic apparatus being capable of receiving power (fig. 1, 20) supplied from the fuel cell or the secondary battery (Fig. 1 22).

With respect to claims 8, 9 and 10, Marvine discloses instructing, by the electronic apparatus, the fuel cell unit to stop (fig. 1, 40; 11 and PROG 13) charging the secondary battery when a predetermined period of time elapses and turning on power if a specific instruction is issued (Col. 4 1-20; Fig. 2 and 3).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 15-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Marvine in view of Pratt et al. (US 2003/0194589).

With respect to claims 15-17, Marvine discloses an electronic apparatus (fig. 1, 20) to which a fuel cell unit is attachable (fig. 1, 12), the fuel cell unit including a fuel cell capable of generating power by chemical reaction (fig. 1, 14 and 42), an auxiliary mechanism (fig. 1, 14) for the fuel cell, and a chargeable/dischargeable secondary

Art Unit: 2838

battery (fig. 1, 22), the electronic apparatus being capable of receiving power supplied from the fuel cell (fig. 1, 12) or the secondary battery 22, the electronic apparatus comprising: a first control section information of a capacity (fig. 1, 40: 11 LUT display list of info) of the secondary battery 22 is smaller than a preset value (col. 4, 40-47); a second control section (fig. 1, 40:13) to display information on a second screen in which at least one of a capacity of the secondary battery to be achieved (col. 3, lines 54-57) and a time period to be charged is settable (fig. 2); a third control section to instruct (fig. 1, 40:13 the program) the fuel cell unit 12, through a portion connecting the electronic apparatus and the fuel cell unit (12) (the fuel cell 12 connected through 24 and 18 to the electronic apparatus 20), to charge the secondary battery 22 in accordance with a content set on the second screen when the at least one of the capacity of the secondary battery to be achieved (col. 3, 54-57) and the time period to be charged is set on the second screen, and turn off a power supply of the electronic apparatus after the charging is completed (the controller 40 has the capability to activates for charging, and turn off when charge is completed: col. 4, 41-46), further comprising a fourth control section to instruct the fuel cell unit to start up when the power supply of the electronic apparatus is turned on (the controller 40 with LUT 11 and PROG 13 program keeps instructing the fuel cell unit to start power supply as mentioned above, but does not expressly teaches a display means. Pratt et al, however, discloses a display means (page7, lines 46-48).

Marvine et al and Pratt et al. are analogous arts because they are from the same field of endeavor namely Fuel cell power source.

At the time of the invention it would have been obvious to a person having ordinary skill in the art to provide a display means as taught by Pratt et al to the fuel cell system of Marvine et al. to ensure the remaining capacity of the secondary battery. The reason for doing would have been that the use of display means in order to display a residual capacity of the battery to charge before it completely depleted and damaged at the result of over discharge.

Response to Arguments

Applicant's arguments filed on 02/08/2007 have been considered but are ineffective to overcome the Marvin reference. (See the rejection above).

Regarding applicant's argument that Marvine does not include "... a first control section that collectively perceives and collectively receives, that is senses and provides instruction to charge the secondary battery ... and second control section to instruct the fuel cell unit to start up when a power supply of the electronic apparatus is on..."

Marvine, however, discloses a first control section (fig. 1, 40; par. 4, lines 41-46) to instruct the fuel cell unit to charge the secondary battery (fig. 1, 22) using power supplied from the fuel cell (fig. 1, 12) in a case where a capacity of the secondary battery is smaller than a first value when a power supply of the electronic apparatus is turned off (par. 4, lines 41-46); and a second control section (fig. 1, 40:13) to instruct the fuel cell unit to start up when a power supply of the electronic apparatus is turned on (par. 3, line 54-57; col. 4, lines 5-8), the fuel cell unit driving the auxiliary mechanism (fig. 1, 14) for the fuel cell using power charged in the secondary battery (fig. 1, 22) in response to the instruction of the start up.

Applicant's argument regarding Pratt "... Pratt merely provides a display means to display ... however, Pratt is... silent concerning any control section..." But, Pratt, as a secondary reference is used to make up the deficiencies of Marvin, and discloses display means as mentioned above in page 7, lines 46-48). Applicant argument that Pratt fails to disclose, "... control section to instruct the fuel cell, through a portion connecting the electronic apparatus..." is not a relevant argument. Marvin has disclosed that part of the claim.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Yalkew Fantu whose telephone number is 571-272-8928. The examiner can normally be reached on M - F: 7- 4.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Karl D. Easthom can be reached on 571-272-1989. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.


KARL EASTHOM
SUPERVISORY PATENT EXAMINER